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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/002,035	11/01/2001	Jeffrey W. Carr	CARR-01000US1	5043

23910 7590 03/24/2005

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EXAMINER
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OLSEN, ALLAN W

ART UNIT	PAPER NUMBER
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1763

DATE MAILED: 03/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/002,035

Applicant(s)

CARR, JEFFREY W.

Examiner

Allan Olsen

Art Unit

1763

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 December 2004.
- 2a) ☐ This action is **FINAL**.      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-15 and 18-67 is/are pending in the application.
- 4a) Of the above claim(s) 41,42,46,50,54 and 58 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,7,9-11,18-40,43-45,47-49,51-53,55-57 and 59-67 is/are rejected.
- 7) ☐ Claim(s) 3-6,8 and 12-15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 May 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_ .
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1, 7, 9-11, 18-20 and 22-39, 44, 45, 48, 49, 52, 53, 56 and 57 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 4,035,604 issued to Meleka et al. (hereinafter, Meleka).**

Meleka teaches a method for finishing articles wherein the surface of the article is treated with a plasma plume such that the burrs are removed from the article's surface. As such plasma smoothes the surface or reduces the surface roughness of the article. Meleka teaches that the method is designed to prevent damaging the surface of the workpiece (column 2, lines 15-30; column 6, lines 41-46). The plasma is produced by a plasma torch that features three concentric gas supply tubes (figure 2, column 4, lines 33-52; column 4, line 59 – column 5, line 10). Meleka teaches providing a reactive gas through the central tube such that reactive species are injected into the central or core region of the plasma. Meleka teaches that the plasma torch may be operated at atmospheric pressure. Meleka teaches the plasma treatment may also be used to provide a coating to the workpiece (column 6, lines 4-12). See also: column 6, lines 37-38 and 57-59.

**Claims 26, 34, 35, 38-40, 43, 45, 47, 49, 51, 53, 55, 57, 59, 61, 63, 65 and 67 are rejected under 35 U.S.C. 102(a) as being anticipated by Böhm et al in DE 199 25 790 A1 (hereinafter, Böhm).**

Böhm teaches a method of shaping an optic with a plasma torch. Böhm teaches placing the workpiece in a plasma processing chamber including a plasma torch; translating at least one of the workpiece and the plasma torch; and using reactive atom plasma processing to shape the surface of the workpiece with the discharge from the plasma torch (see: figure 1 and 3; Section B, Example 1). Böhm teaches that the material being shaped may be; silicon, silicon glass optics, and aspheric optics. Böhm teaches shaping the surface of the workpiece can be accomplished by removing material from the surface of the workpiece (see abstract) or by depositing material onto the surface. Böhm teaches selecting an appropriate gas to tailor process so as to achieve the desired results. Böhm teaches selectively removing one portion of a surface another masked portion is not similarly reacted. Böhm teaches rotating the workpiece with respect to the plasma torch (see abstract). Böhm teaches placing a precursor in a central channel of the plasma torch (see fig. 1). Böhm teaches etching with SF<sub>6</sub> and CF<sub>4</sub> as a plasma gas. Böhm teaches introducing a plasma gas through an outer tube of the plasma torch and introducing an auxiliary gas through a second of three concentric tubes in the plasma torch (see claims 1 and 18). Böhm teaches using an auxiliary gas to keep hot plasma away from a central channel of the plasma torch and to adjust the position of a discharge (see claim 1). Böhm teaches the processing chamber pressure may be above at or below atmospheric pressure (see 3<sup>rd</sup> paragraph under section heading "Solution Provided by Invention").

***Response to Arguments***

Applicant's argument, filed October 28, 2004, with respect to the RAPP plasma being annular whereas the shape of Bohm's plasma is spherical, has been fully considered and is are persuasive. The rejection over Bohm of claims pertaining to an annular or toroidal plasma have been withdrawn.

Applicant's arguments, filed October 28, 2004, have been fully considered but they are not persuasive. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., RAPP is a deterministic controlled process, capable of making predictable corrections; RAPP produces a downstream plasma the removes material everywhere the plasma impinges; RAPP works on electrically insulators and conductive materials; the way the discharge creates the reactive species) are not recited in the rejected claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

***Allowable Subject Matter***

Claims 3-6, 8 and 12-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 21, 60, 62, 64 and 66 are allowed.

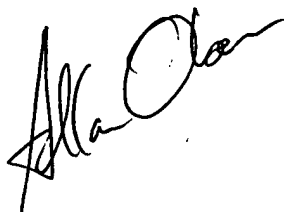
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**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allan Olsen whose telephone number is 571-272-1441. The examiner can normally be reached on M-F 1-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on 571-272-1435. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Allan Olsen', is positioned to the left of the printed name and title.

Allan Olsen  
Primary Examiner  
Art Unit 1763